

I. INTRODUCTION

- A. Purpose: The purpose of this Regulation is to establish a consistent regulatory guide for safety, construction, maintenance, testing, inspection and emergency preparation.
- B. Scope: This Regulation shall apply to all refineries and chemical plants that store, handle, process, or distribute hazardous materials that are regulated by the County of Los Angeles Fire Code.
- C. Author: The Deputy Chief of the Prevention Services Bureau, through the Assistant Fire Chief (Fire Marshal) of the Fire Prevention Division, is responsible for the content, revision, and periodic review of this regulation.
- D. Authority:
 - 1. County of Los Angeles Fire Code
 - 2. The Building Code of the jurisdiction
 - 3. Where no specific standards or requirements are specified in this Regulation or are obtainable within other applicable laws or ordinances, compliance with the standards of the National Fire Protection Association, American Petroleum Institute or other nationally recognized fire-safety standards as approved by the Chief shall be deemed in compliance with this regulation

A. Definitions:

ALTER AND ALTERATION is any change, addition or modification in construction or occupancy.

ANSI: American National Standards Institute.

API: American Petroleum Institute

APPROVED refers to approval by the Chief, as the results of an investigation and tests conducted by him; or by reason of accepted principles or tests by national authorities, technical or scientific organizations.

INSPECTOR refers to a person qualified and approved to make an inspection, examination, check, test or to perform any other operation to determine whether any piece of equipment is safe, deteriorated, accurate, or functioning properly. He/she may be a fulltime inspector, maintenance mechanic or supervisor, an engineer, or any other adequately qualified person to whom the management is willing to delegate responsibility while he/she is performing any of the previously mentioned duties.

PIPING SYSTEMS shall include pipes of any kind and, in addition, fittings, valves, and pipe coverings used to identify a hazard.

ROUTINE AND MINOR REPAIRS are those repairs that can be made without interruption to the routine operation of the system to be repaired. This would include repairs that are part of the approved inspection program.

II. RESPONSIBILITY

- A. Owners and management of refineries, bulk plants and chemical plants are responsible for compliance with this regulation.

III. POLICY

- A. This Regulation will be enforced by all Department personnel to ensure adequate fire and life safety for facilities that handle, store or process hazardous materials.

IV. PROCEDURES

- A. Permits:
 - 1. Required fire code permits shall be obtained from the Fire Prevention Division, Petroleum and Chemical Unit prior to the operation of a chemical plant, refinery or crude petroleum facility. A permit shall not be issued until approval has been obtained for operation with respect to topography, proximity to places of assembly, residential or mercantile occupancies, and adequacy of water supply for fire control has been verified. Subsection III E and IV F of this Regulation shall be complied with prior to issuance of a permit to operate. The permit shall be reviewed for compliance and is valid

until revoked or for such a period of time as designated therein at the time of issuance. Los Angeles County Fire Code Title 32.

2. Existing occupancies may be required to have one or more of the following permits:

- a. Compressed gases
- b. Cryogenics
- c. Flammable or combustible liquid pipeline operation
- d. Flammable or combustible liquid tanks
- e. Hazardous materials
- f. Liquefied petroleum gases
- g. Oil and natural gas wells

B. New construction:

- 1. Building construction shall be in accordance with the Los Angeles County Building and Fire Codes.
- 2. All piping, valves, and fittings shall comply with the Fire Code and the following:

- a. Alterations and additions to existing pipe systems must be approved by the Fire Department before work begins.

EXCEPTION: Routine and minor repairs that have been tested and certified for operation by an approved inspector. (API 1110)

- b. Before pipe systems are placed in service they shall be tested and certified for operation by an approved inspector, (API 1110) who shall notify the Fire Department 48 hours prior to the test.
- c. Emergency shut-off valves that have been identified in the required safety-training program shall be conspicuously marked.
- d. All pipes shall be marked as required by ANSI Standard, A13.1.

3. Processing equipment not covered by other new construction requirements shall comply with the Fire Code and the following:

- a. Alterations and additions to existing processing equipment must be approved by the Fire Department before work begins.

EXCEPTION: Routine and minor repairs that have been tested and certified for operation by an approved inspector.
(API 1110)

- b. Before processing equipment is placed in service it shall be tested and certified for operation by an approved inspector, (API 1110) who shall notify the Fire Department 48 hours prior to the test.

C. Maintenance and testing of existing facilities:

1. All occupancies regulated by this document shall develop and implement an inspection program. The American Petroleum Institute "Guide for Inspection of Refinery Equipment" may be used or any other National Standard approved by the Chief.
2. The inspection program shall address at least these items:
 - a. All pipe systems.
 - b. All fire protection systems.
 - c. All processing equipment.
 - d. All tanks above and below ground.
 - e. All structures on the permitted site.
 - f. All safety equipment, i.e., self-contained breathing equipment, fire fighting equipment, fire blankets, etc.
3. All permitted occupancies shall be maintained reasonably free from oil, grease, and other combustible waste such as grass, weeds or trash.
4. All existing pipe systems and processing equipment shall be certified by an approved inspector, as meeting the requirements for safe operation. If the pipe system or process equipment cannot be certified, it shall be taken out of service and repaired or removed from the site.

5. Above ground tanks shall be identified as required by Section 7904.2.3 of the Los Angeles County Fire Code.
 6. Pipelines and valves that contain flammable, combustible, corrosive, toxic or highly toxic liquids or gases shall be identified to indicate their contents or purpose (ANSI Standard A13.1).
 - a. Pipes shall be identified by contents.
 - b. Valves that have been identified in the required safety training program shall be conspicuously marked with a sign that describes the function of the valve in an emergency.
 7. Drainage dikes shall be maintained as required by Los Angeles County Fire Code, Section 7902.2.8.
- D. Safety plan and training:
1. All occupancies regulated by this document shall establish an approved emergency plan. The plan shall include but not be limited to the following:
 - a. Pre-emergency planning.
 - b. Clearly delineated supervisor responsibilities for specific emergencies and functions such as evacuation, firefighting, valve shut down, liaison with other agencies, utilities, etc.
 - c. Areas of refuge and safe distance on and off site.
 - d. Emergency traffic control and security.
 - e. Evacuation routes and procedures.
 - f. Weather monitoring with the ability to make downwind plume projections.
 - g. Emergency First Aid Stations and treatment centers.
 2. All occupancies regulated by this document shall establish an approved safety training program. The training program shall include, but not be limited to, the following:
 - a. Procedures for emergency operations.
 - b. All automatic operations shall be constantly monitored.

- c. All new employees shall complete a basic safety-training program prior to beginning work.
- d. Regular safety refresher training classes and a record of the training.
- e. Training and use of emergency equipment.
- f. Familiarization of emergency shut-off valves and their use.
- g. Safety training programs shall be based on American Petroleum Institute Publication 2001 or any other national Standard approved by the Chief.
- h. Procedures for employees and off-site emergency alarm notification.
- i. Emergency operations center (E.O.C.) shall be in a safe location or designed and constructed to reflect the hazards of the permitted site. The E.O.C. shall include at least:
 - (1) An area large enough for emergency personnel that might be used during an emergency.
 - (2) Telephone communications.
 - (3) All automatic alarms that are monitored.
 - (4) Controls for required remote emergency system, i.e., ventilation controls and unmanned monitors.
- j. The emergency plan shall be compatible with and include all other required emergency plans.
- k. A copy of the emergency plan and procedures shall be maintained at the E.O.C. or other approved location and updated as needed.

E. Bulk plants or terminals, refinery transfer operations

- 1. Portions of properties where flammable and combustible liquids are received by tank vessels, pipelines, tank cars or tank vehicles and are stored or blended in bulk for the purposes of distributing such liquids by tank vessels, pipelines, tank cars, tank vehicles or containers shall be in accordance with Los Angeles County Fire Code Section 7904.4, 7904.5 and 7904.7.

2. Bulk transfer and process transfer operations and the dispensing of fuel into the fuel tanks of motor vehicles and special equipment shall be approved by the Petroleum Chemical Unit of the Los Angeles County Fire Department, and shall be in accordance with Los Angeles County Fire Code Section 7904.5.
3. Class I, II or III Liquids shall be transferred from a tank vehicle or tank car only into an approved atmospheric tank. Liquids shall not be transferred from a tank vehicle or a tank car into the cargo tank of another tank vehicle or tank car.
4. Tank vehicles and railroad tank cars shall be unloaded as soon as possible after arrival at point of delivery and are not to be used as storage tanks. A permit is required for a tank car to remain on a siding at the point of delivery while connected for transfer operation.